

REMARKS

By this Amendment, applicants have amended claim 1 to more specifically recite molecule(s) found in the dispersed aqueous phase. Since the molecules are now incorporated into the main claim, claims 10, 11, 12 and 13 have cancelled, without prejudice. Applicants have also amended the word "stability" in claim 1, line 4 to recite "solubility" in view of the obvious typographical error ("solubility" is used through the specification and claims). Similarly, applicants have amended claim 16 to recite specific molecule and applicants have amended claim 16, subparagraph (a), to recite "solubility" instead of "soluble".

As discussed in more detail below, the amendments are intended to highlight the fact that the subject invention is a selection patent where specific molecule (i.e., meeting specific criteria as to solubility and molecular weight); and specific surfactants (i.e., in rod-like shape and having defined N_s value) must be used in order to obtain the specific, stable, aqueous-aqueous emulsions (i.e., within a specific region of phase diagrams, said region varying only depending on specific surfactant system and/or dispersed phase molecule used) of the invention.

All of the art cited by the Examiner may generally disclose dispersed phase molecules (with no teaching or suggestion that said molecules necessarily be within the specific criteria defined by the subject invention); or may generally disclose the multiple shapes surfactant may take (with no teaching or suggestion that the surfactant or surfactant system must have a certain shape), but fails to teach or disclose that specific molecules and specifically shaped surfactants must be used to obtain aqueous-aqueous emulsions falling specifically within regions of the phase diagram in which applicants' invention is interested.

At page 2 of the Office Action, for example, the Examiner has rejected claims 1-7, 9 and 11-16 under 35 USC §102(e) as allegedly anticipated by U.S. Patent No. 6,797,683 to Shana'a et al. This rejection is respectfully traversed for reasons set forth below.

As the Examiner himself notes at page 3 of the Office Action (last 5 lines), when there is sufficient surfactant to form micelles, spherical, cylindrical, spherocylindrical or ellipsoidal micelles may form (citing from Shana'a). By contrast, the claims of the subject invention specifically require that micelles be rod-like. This rod-like shape is defined in the claim by the fact that value of N_s must be about $1/3$ to $1/2$. Surfactants having larger N_s (e.g., N_s of about $1/2$ to 1) will tend to form lamellar micelles (page 11, lines 18-19) and such surfactants will tend not to cause phase separation (page 12, lines 13-17). Surfactants with small N_s (e.g., 0 to $1/3$) form spherical micelles and also tend not to cause phase separation (page 12, lines 10-11).

Thus, the teaching in Shana'a that surfactant may be spherical, rod-like or micellar demonstrates a failure to understand the criticality of the invention, i.e., that only that specific combination of rod-like micelles and specifically defined molecules will form the stable aqueous-aqueous emulsions of the invention. It is only this specific combination which (by what applicants believe, is the "depletion-flocculation process") will allow these stable emulsions to be formed. That is, without wishing to be bound by theory, it is believed that, unless dispersed aqueous phase exhibits phase separation by the depletion flocculation system, the stable emulsion of the invention will not form. Whatever the mechanism is, if surfactant having defined N_s value and molecule having required solubility and MW are not used, the stable emulsions are not formed.

Thus, again, where Shana'a broadly discloses use of PEG as a humectant, this not only fails to recognize that PEG must be of a defined solubility and MW (as in applicants' claims), but fails to recognize that the specific molecule must also be used with specific surfactant shape to obtain the stable emulsion of the invention.

With regard to U.S. Patent No. 6,534,456 to Hayward cited at page 4, the same arguments hold true.

That is, Hayward may talk generally about lamellar phase compositions or micellar phase compositions but fails to recognize that applicants require only rod-shaped surfactant may be sued (as defined by Ns value). As for disclosure of PVP, again, the reference fails to recognize criticality of solubility and MW. Not all PVPs would work, only those meeting the required criteria of invention, and even these only if combined with rod-like surfactants. Applicant's claims represent a classic examples of a selection patents, especially with further amendments to the claims to define the molecule in a dispersed phase.

Similarly with the other three references cited by the Examiner, i.e., U.S. Patent No. 6,531,442 to Durbut; U.S. Patent No. 5,922,664 to Cao and U.S. Patent No. 5,785,979 to Wells.

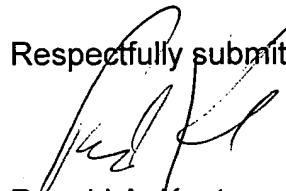
Whatever disclosure these references may have as to emulsion and surfactants forming the; and whatever disclosures they may have as to molecules found in our dispersed phase, there is no recognition of the specificity and criticalities of the subject invention. None of these references teaches or suggests: (1) that surfactant must be in rod-like shape (defined by Ns value); (2) that molecule in dispersed phase must meet defined solubility and MW criteria; and (3) that both these requirements must be met simultaneously.

As noted above, the present invention is a classic example of a selection patent wherein specific defined criteria must be met to obtain a specific result (i.e., the specific stable aqueous-aqueous emulsions of the invention). These specific requirements could not possibly have been drawn out of the cited art except in hindsight (e.g., by picking and choosing required elements after the fact) and such hindsight reconstruction is of course prohibited by the patent laws.

In view of the amendments and discussion above, it is respectfully requested that the Examiner withdraw the rejections of the claims and allow the claims as now amended (i.e., claims 1-9 and 14-16 as amended).

If a telephone conversation would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone him at the number provided.

Respectfully submitted

A handwritten signature in black ink, appearing to read 'Ronald A. Koatz', is written over the typed name.

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